

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312836

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CP250-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312836
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L83050-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2872.0 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

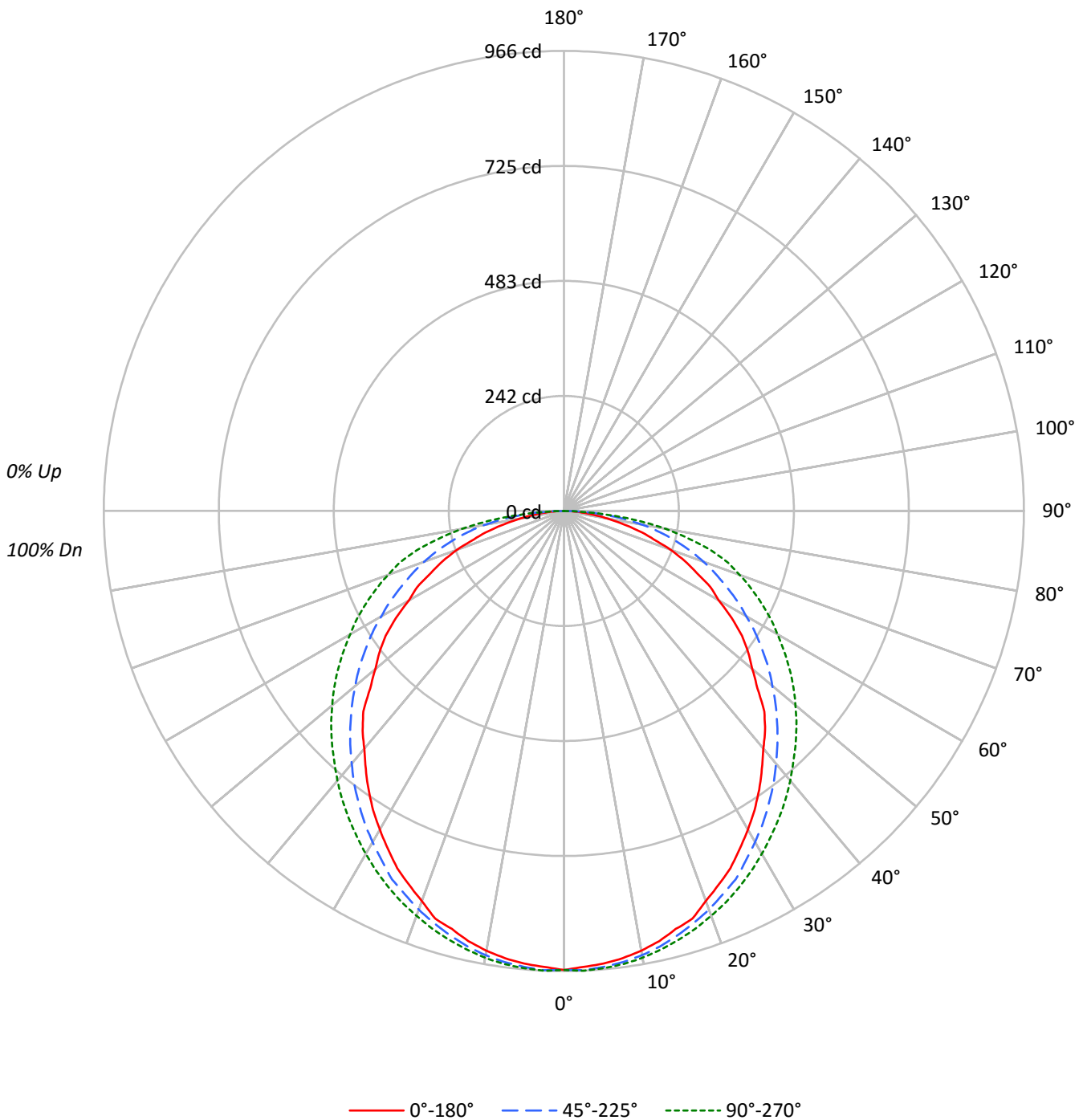
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-34HE-UNV-L83050-CP250-W2A-U-3500K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2593	2593	2593
5°	2577	2595	2603
10°	2562	2588	2603
15°	2531	2569	2596
20°	2496	2551	2590
25°	2457	2534	2588
30°	2400	2495	2584
35°	2348	2465	2587
40°	2289	2434	2598
45°	2265	2412	2621
50°	2164	2394	2659
55°	2141	2386	2715
60°	2020	2382	2789
65°	1961	2398	2914
70°	1882	2455	3093
75°	1714	2530	3330
80°	1469	2620	3366
85°	1189	2504	2887



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.2	3.2
10°-20°	260.1	9.1
20°-30°	391.5	13.6
30°-40°	469.8	16.4
40°-50°	491.1	17.1
50°-60°	457.7	15.9
60°-70°	375.4	13.1
70°-80°	252.9	8.8
80°-90°	82.4	2.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	742.8	25.9
0°-40°	1212.6	42.2
0°-60°	2161.3	75.3
0°-90°	2872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2872.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	964	964	964	964	964	
5°	954	957	961	962	964	91
15°	909	914	922	931	932	257
25°	828	833	854	866	872	380
35°	715	724	750	777	788	447
45°	595	599	634	672	689	455
55°	456	465	509	557	579	404
65°	308	322	377	432	458	306
75°	165	183	243	298	320	173
85°	38	55	81	95	94	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	963.6	963.6	963.6	963.6	963.6
2.5°	958.1	960.8	965.0	966.3	966.3
5°	954.0	956.7	960.8	962.2	963.6
7.5°	947.1	949.8	955.3	958.1	959.5
10°	937.5	940.2	947.1	951.2	952.6
12.5°	925.1	927.8	936.1	941.6	943.0
15°	908.6	914.1	922.3	930.6	932.0
17.5°	897.6	896.2	907.2	916.8	919.6
20°	871.5	878.4	890.7	901.7	904.5
22.5°	849.5	855.0	871.5	883.9	889.4
25°	827.5	833.0	853.6	866.0	871.5
27.5°	800.0	808.3	827.5	845.4	852.2
30°	772.5	780.8	802.8	823.4	831.6
32.5°	745.0	754.6	778.0	800.0	809.6
35°	714.8	724.4	750.5	776.6	787.6
37.5°	683.2	695.5	723.0	751.9	764.3
40°	651.6	663.9	692.8	725.8	739.5
42.5°	625.4	630.9	663.9	699.7	713.4
45°	595.2	599.3	633.7	672.2	688.7
47.5°	551.2	566.3	603.4	646.1	662.5
50°	516.8	533.3	571.8	617.2	635.1
52.5°	488.0	499.0	541.6	586.9	607.6
55°	456.4	464.6	508.6	556.7	578.7
57.5°	417.9	433.0	477.0	526.5	548.5
60°	375.3	394.5	442.6	496.2	518.2
62.5°	347.8	358.8	411.0	464.6	489.4
65°	307.9	321.7	376.6	431.6	457.7
67.5°	274.9	288.7	345.0	400.0	426.1
70°	239.2	252.9	312.0	367.0	393.1
72.5°	197.9	217.2	279.0	334.0	361.5
75°	164.9	182.8	243.3	298.3	320.3
77.5°	127.8	151.2	207.6	252.9	269.4
80°	94.8	118.2	169.1	202.1	217.2
82.5°	64.6	88.0	126.5	151.2	159.5
85°	38.5	55.0	81.1	94.8	93.5
87.5°	17.9	23.4	33.0	33.0	31.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)